

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Ronald VERMEER

Art Unit: 1616

Application No.: 10/572,719

Examiner: Abigail L. FISHER

Filed: March 21, 2005

Docket No.: 2903925-265000

For: CONCENTRATED SUSPENSIONS

APPELLANT'S REPLY BRIEF

Mail Stop APPEAL BRIEF – PATENTS

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

This is a reply to new arguments raised in the Examiner's Answer mailed July 21, 2011
("Examiner's Answer").

I. Status of Claims

Claims 11, 14 – 15, 17, 22, and 25 – 36 are pending in the current application. Claims 11, 14 – 17, 22, and 25 – 36 stand finally rejected under 35 U.S.C. § 103(a) and are under appeal. Claim 16 was canceled by way of a supplemental amendment dated on May 11, 2011. The Examiner entered the amendment in an Advisory Action dated June 2, 2011.

II. Grounds of Rejection to be Review on Appeal

Whether Claims 11, 14, 15, 17, 22, and 26 – 34 are properly rejected under 35 U.S.C. §103(a) as being allegedly obvious over U.S. Patent Application Publication No. 2001/0051175 ("Strom"), in view of Pesticide Sci 153-160 (1995) ("Grayson"), and EP 1023832 ("Aven") as evidenced by U.S. Patent Application Publication No. 2002/0040044 ("Schlatter").

Whether Claims 11 and 16 are properly rejected under 35 U.S.C. §103(a) as being allegedly obvious over Strom in view of Grayson, U.S. Patent No. 6,559,136 ("Mauler-Machnik"), and WO 9727189 ("Heinemann").

Whether Claim 35 is properly rejected under 35 U.S.C. §103(a) as being allegedly obvious over Strom in view of Grayson and Aven as evidenced by Schlatter and further in view of U.S. Patent Application Publication No. 2003/0035852 ("Pullen").

Whether Claim 36 is properly rejected under 35 U.S.C. §103(a) as being allegedly obvious over Strom in view of Grayson, Aven, and Schlatter.

III. Arguments

A. Rejections Under 35 U.S.C. §112

Claim 16 was canceled by way of a preliminary amendment in the Supplemental Response dated May 11, 2011. The rejection of Claim 16 under 35 U.S.C. §112 was withdrawn by the Examiner in the Advisory Action dated June 2, 2011 and it is Appellants understanding that this rejection is no longer pending.

B. Rejections Under 35 U.S.C. §103

i. Rejection of Claims 11, 14 – 15, 17, 22, and 26 – 34 over Strom, Grayson, and Aven and as evidenced by Schlatter

Claims 11, 14, 15, 17, 22, and 26 – 34 stand rejected under 35 U.S.C. §103(a) as being allegedly obvious over Strom in view of Grayson and Aven and as evidenced by Schlatter. Appellants disagree for at least the reasons that follow as well as the reasons set forth in the Appeal Brief dated May 11, 2011, which is herein incorporated by reference in its entirety.

In maintaining the claim rejections, the Examiner selectively chooses elements from each of Strom, Grayson, Aven, and Schlatter and assembles these features together to arrive at the claims without any motivation to do so. The Examiner also ignores the fact that a person skilled in the art is faced with numerous compound and composition alternatives when assembling, for example, an agrochemical formulation. For example, if a specific alkanolethoxylate (e.g. of the Genapol series) enhances the penetration of an active agent, such as metconazole, in a composition containing certain dispersants and other compounds, as described in Grayson, the person skilled in the art would have no reasonable expectation that substituting any of these active agents or dispersants would lead to a composition capable of exhibiting similar physiochemical properties. Moreover, a person of ordinary skill of the art would recognize that each of Strom, Grayson, Aven, and Schlatter is concerned with specific formulations and would have no reason to randomly pick and choose features from these references in a manner that would render the claims obvious.

The Examiner raised new arguments 1 – 7 in the Examiner’s Answer on pages 17 – 22. The Examiner’s new arguments are addressed in 1 – 7 below.¹

1. The Examiner does not properly consider the recitation of “consisting of” when rejecting the claims

In rejecting the claims, the Examiner asserts that “[w]hile Strom et al. may exemplify amounts of water that fall outside the scope of the instant claims, the rejection is made under 103 and does not need to exemplify all embodiments, only suggest them.” Examiner’s Answer at page 17. Furthermore, the Examiner asserts that “Strom et al. teach the combination of surfactant, water and an active compound” and “[s]urfactants are present in 1 to 30% and the active compounds are present from 1 to 60%” and “[t]hereby, by default, water is present from 98 to 10%.” *Id.* Appellants respectfully disagree.

As set forth in the Appeal Brief filed May 11, 2011, Claim 11 is directed to a suspension concentrate “consisting of” components (a) – (e). The cited references include subject matter that is in addition to the recited components (a) – (e). For instance, Strom teaches compositions containing larger amounts of water than the “between 40 and 65% by weight” set forth component (c) of Claim 11. For instance, Example 1 and Example 3 of Strom teach compositions containing 93.3% and 78% of water, respectively.

The Examiner asserts that Strom teaches an active compound in the range of 1 to 60% and a surfactant in the range of 1 to 30% and “[t]hereby, by default, water is present from 98 to 10%.” Examiner’s Answer at page 17. Appellants respectfully disagree and submit that such a calculation ignores any other potential elements in the compositions described by Strom. Moreover, the Examiner’s calculation relies on extrapolating the broad teaching of Strom, without any motivation to do so, in a manner that would lead to an amount of water that is “between 40 and 65% by weight.” However, a person of ordinary skill in the art would have no motivation to modify the compositions of Strom, especially in light of Examples 1 and 3 that teach compositions containing 93.3% and 78% of water, respectively. The compositions of

¹ As set forth in the Appeal Brief dated May 11, 2011 Claims 11, 27 – 30, and 32 – 34, Claim 14, Claim 15, Claim 17, Claim 22, Claim 25, Claim 26, Claim 31, and Claims 35 – 36 are argued separately.

Strom represent a deliberate balance of chemical ingredients and are concerned with maintaining specific water solubility and melting point properties. Strom, for example, at paragraph [0004]. Therefore, a person of ordinary skill in the art would have no reason to deviate from the compositions taught by Strom with a reasonable expectation that such alterations would lead to compounds with the desired physiochemical properties.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

2. The cited references provide no motivation to include prothioconazole, tebuconazole, metaminostrobin, or trifloxystrobin in the claimed suspension concentrate

The Examiner asserts that “Strom et al. suggest classes of compounds such as azoles and strobilurins” and “[t]herefore, one of ordinary skill in the art would have been motivated to select compounds from these classes.” Examiner’s Answer at page 19. The Examiner further asserts that “Aven teaches that the instantly claimed active compounds are well known, commercially available, and utilized for the fungicidal activity as does Mauler and Heinemann.” *Id.* Appellants respectfully disagree.

In rejecting the claims, the Examiner fails to specifically address the remarks set forth in the Appeal Brief filed on May 11, 2011. Specifically, the Examiner does not provide evidence as to why one of ordinary skill in the art would combine the teachings of Strom, Grayson, Aven, and Schlatter in a manner that would render the claims obvious, especially given that the primary Strom reference fails to teach or suggest any of the claimed active compounds. As set forth in the Appeal Brief filed on May 11, 2011, Grayson does not teach or suggest the claimed active agents, Aven teach a laundry list of over 150 pesticides, fungicides, and herbicides, and Schlatter teach aqueous suspension concentrates comprising a pesticide and surfactant. None of the cited references, alone or in combination, suggest the use of the claimed active, in a suspension concentration as claimed.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

3. None of the cited references teach or suggest between 5% and 20% by

**weight of the claimed alkanolethoxylate penetration enhancer of
Formula (I) in the claimed suspension concentrate**

In rejecting the claims, the Examiner asserts that "Grayson et al. teach that these adjuvants (compounds of instantly claimed Formula I) when added to suspension concentrates drastically enhance their performance." Examiner's Answer at page 19. In addressing this deficiency, the Examiner cites to Grayson and asserts that "one of ordinary skill in the art would have been motivated to add ethoxylate alcohols, such as, the Genapol adjuvants to the formulation of Strom et al. et al. to enhance absorbance of the pesticides based on the teachings of Grayson et al." *Id.* Appellants respectfully disagree.

As set forth in the Appeal Brief dated May 11, 2011, Strom teaches compositions comprising stable aqueous dispersions of a pesticide having specific physiochemical characteristics: (a) a water solubility of less than 0.1 percent and (b) a melting point "sufficiently high so as to melt during melting." Strom, for example, at paragraph [0004]. Strom teaches numerous classes of compounds that exhibit the desired water solubility and melting point properties. *Id.* at paragraphs [0012] to [0015]. Given this, a person of ordinary skill in the art would have no motivation to alter the composition of Strom by including between 5% and 20% by weight of the claimed alkanolethoxylate penetration enhancer of Formula (I) with a reasonable expectation that such an addition would maintain the specific physiochemical properties desired by Strom

The Examiner focuses on the penetration properties associated with combining an alkanolethoxylate from the Genapol series with metconazole and asserts that a person of ordinary skill in the art would therefore be motivated to combine the claimed alkanolethoxylate compounds with prothioconazole, tebuconazole, metaminostrobin, or trifloxystrobin. Examiner's Answer at pages 19 – 20. The Examiner asserts that "fungicides metconazole, tebuconazole, and prothioconazole all possess the same core and therefore would be expected to be effected similarly by the inclusion of the Genapol ethoxylates." *Id.* Appellants respectfully disagree.

While prothioconazole and tebuconazole belong to the same general class of compounds as metconazole, triazoles, metaminostrobin and trifluxystrobin belong to a different class of actives, strobilurines. Accordingly, a person skilled would have no motivation to combine the

teachings of Grayson and Strom with a reasonable expectation of success as trifloxystrobin and metaminostrobin (strobilurines) belong to a chemically distinct class of compounds than metconazole. Like metconazole, both tebuconazole and prothioconazole can be broadly classified as triazoles. Nevertheless, since each individual compound exhibits its own individual properties, a person of ordinary skill in the art would have no reasonable expectation that tebuconazole and prothioconazole would be influenced by a given alkanolethoxylate in the same manner as metconazole. Moreover, as set forth in the Appeal Brief mailed May 11, 2011, even if one of skill in the art would be motivated to modify Strom by adding an alcohol ethoxylate of Grayson, none of the cited references teach or suggest "between 5 and 20% by weight" of a penetration enhancer.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

4. None of the cited references teach or suggest between 3% and 8% by weight of the claimed dispersant mixture (c) in a suspension concentrate as claimed

In rejecting the claims, the Examiner asserts that "[r]egarding Appellant's fourth argument, Strom et al. teach surfactants are present from 1 to 30%" and "Strom et al. also suggest the use of combinations of cationic and nonionic or anionic and nonionic." Examiner's Answer at page 20. The Examiner further asserts that "[t]herefore, since the total amount of surfactant is suggested by Strom et al. and combinations of surfactants are suggested by Strom et al the instantly claimed concentration of surfactants is *prima facie* obvious." *Id.* Appellants respectfully disagree.

As set forth in the Appeal Brief filed on May 11, 2011, Strom generally discloses surfactants, but fails to teach or suggest any of the claimed dispersant mixtures (i), (ii), or (iii). Additionally, even if Strom suggested the claimed dispersant mixtures of (i), (ii), or (iii), one of ordinary skill in the art would have no motivation to combine any of the claimed dispersant mixtures of (i), (ii), or (iii) in an amount between 3% to 8%. For example, even though none of the seven examples set forth in Strom teach or suggest any of the specific dispersant mixtures, Example 3 of Strom teaches a composition comprising a total of 18% surfactant; Atlox 4991 surfactant (6%) and Atlox 4913 surfactant (12%). Strom at paragraph [0025]. None of

Grayson, Aven, and Schlatter provide any motivation to modify the compositions of Strom in a manner that would render the claims obvious.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

5. The Dr. Peter Baur Declarations dated April 23, 2008 and December 18, 2008 provide for unexpected results

The Examiner asserts that “the declarations of Dr. Bauer show that Genapol C100 enhances the penetration of tebuconazole when compared to compositions comprising only tebuconazole or tebuconazole and Atlox 4984” and that “one of ordinary skill in the art would not find appellant's results unexpected.” Examiner’s Answer at page 21. The Examiner further asserts that “Appellant has not shown that the penetration enhancement of the Genapol compounds with the instantly claimed active agents is unexpectedly better than one of ordinary skill in the art would expect (i.e. unexpectedly better than the enhancement seen with metconazole).” *Id.* Appellants respectfully disagree.

As set forth in the Appeal Brief filed on May 11, 2011, the Dr. Peter Baur Declarations submitted on April 23, 2008 and December 18, 2008 provide further evidence of the patentability of the claims. Specifically, the Dr. Peter Baur Declarations indicate that a variety of compositions containing tebuconazole and Genapol C-100 provide for increased penetration enhancement properties as compared to a wide-range of compositions containing tebuconazole together with other dispersant compounds. *See*, for example, the Dr. Peter Baur Declarations submitted on April 23, 2008 at formulations A – D and the Dr. Peter Baur Declarations submitted on December 18, 2008 at formulations A1 – E. The Examiner refutes the relevancy of the evidence provided in the Dr. Peter Baur Declarations and asserts that the Declarations fail to show that combinations of tebuconazole with Genapol are “unexpectedly better than the enhancement seen with metconazole.” However, as explained above, one of ordinary skill in the art would have no motivation to look to structurally distinct compositions comprising metconazole as the claims recite prothioconazole, tebuconazole, metaminostrobin, or trifloxystrobin.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C.

103(a) rejection.

6. None of Strom, Grayson, Aven, Schlatter, and Pullen teach or suggest adding "butylated hydroxytoluene" to the claimed composition of claim 35

In rejecting the claims, the Examiner asserts that “[o]ne of ordinary skill in the art would have been motivated to look to Pullen as Pullen is directed to a similar (fungicide and pesticide) composition.” Examiner’s Answer at page 21. The Examiner further asserts that “one of ordinary skill in the art would have been motivated to add a preservative in order to preserve the final composition and one of ordinary skill in the art would have had a reasonable expectation of success as preservatives are conventional ingredients added to suspension concentrates.” *Id.*

At the outset, Pullen does not teach or suggest any of the claimed components (a) – (d) of Claim 11. Rather, the Examiner cites to Pullen and asserts that this reference provides motivation to add "butylated hydroxytoluene" to the composition as component (e) of Claim 11. Pullen teaches biorational insecticide and fungicides used for controlling insects and fungi. Pullen at abstract. In an aspect, Pullen teaches that the composition may comprise from about 0.05% to about 0.15% by weight of butylated hydroxytoluene. *Id.* at paragraph 0034. However, Pullen does not provide any motivation to add butylated hydroxytoluene to a composition, let alone a composition containing components (a) – (e) as set forth in the claims. Given the teachings of Pullen, there would be no reason to add butylated hydroxytoluene to the claimed composition of Strom et al., Aven, or Grayson.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

7. None of the cited references teach or suggest adding any one of sunflower oil, rapeseed oil, olive oil, or soybean oil of claim 36 to the composition of Strom

In rejecting the claims, the Examiner asserts that “Aven teaches that solvents are conventional ingredients to add to suspension concentrations” and “Schlatter teaches that one of the solvents known to be useful in suspension concentrates is soybean oil.” Examiner’s Answer at page 22. The Examiner further asserts that “[t]herefore, one of

ordinary skill in the art would have been motivated to add an oil in order to aid in the solubilization or suspension of components of the suspension concentrate as taught by Schlatter.” *Id.* Appellants respectfully disagree.

As set forth in the Appeal Brief dated May 11, 2011, Schlatter does not teach or suggest any of the claimed components (b) – (d) and fails to provide motivation to add any of the claimed vegetable oils to the composition of Strom. In an aspect, Schlatter teaches that the composition may comprise a thickening agent, such as ethoxylated vegetable oil. *Id.* at paragraph 0040. As referenced above, Strom teaches compositions having specific physiochemical characteristics including (a) a water solubility of less than 0.1 not provided percent and (b) a melting point “sufficiently high so as to melt during melting.” Strom, for example, at paragraph [0004]. Given this, a person of ordinary skill in the art would have no motivation to alter the composition of Strom by including any of the claimed vegetable oils with a reasonable expectation that such an addition would maintain the specific physiochemical properties desired by Strom.

For at least the reasons above, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

8. Rejection of Claims 11 and 16 over Strom, Grayson, and Mauler-Machnik and Heinemann

Claims 11 and 16 stand rejected under 35 U.S.C. §103(a) as being allegedly obvious over Strom in view of Grayson, Mauler-Machnik, and Heinemann. Claim 16 was canceled by way of a Supplemental Response dated May 11, 2011. The Examiner did not raise any new arguments regarding the rejection of Claim 11. Accordingly, Appellants respectfully disagree for at least the reasons set forth in the Appeal Brief dated May 11, 2011.

For at least the above reasons, Appellants respectfully request withdrawal of the 35U.S.C. 103(a) rejection.

IV. Conclusion

Appellants respectfully submit that the Examiner has not set forth a proper *prima facie* case of obviousness because no reasoning has been articulated based on rational underpinnings to support the legal conclusion of obviousness under the *KSR* standard.

Respectfully submitted,

By /David L. Vanik/

David L. Vanik, Ph.D.
Registration No.: 64,547
Direct Telephone No.: 202-508-3406
David W. Woodward
Registration No. 35,020

Date: September 9, 2011

920 Massachusetts Avenue
Suite 900
Washington, DC 20004

Telephone: 202-508-3400
Facsimile: 202-508-3402